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Stability and the Nth country problem

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By Robert W. Tucker

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FOREWORD

This paper was prepared for Project VULCAN, a study of Arms Control and a Stable Military Environment, which was made by the Special Studies Group of IDA for the Department of State under contract No. SCC 28270, dated 24 February 1961. Dr. J. I. Coffey was the Project Leader.

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The judgments expressed are of course the author's and do not necessarily reflect the views of the Institute for Defense Analyses or of any agency of the United States Government.

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SUMMARY

It is likely that nuclear diffusion will prove destabilizing if for no other reason than that it will present us with a novel world, and one substantially less secure than the present world. The acquisition of nuclear weapons may be expected to have a sobering effect upon nations, but any increase of prudence may be more than offset by the insecurity many nations will experience.

The impact of the Nth country problem on stability will depend largely upon the nature and quality of the weapons systems Nth countries acquire. In relation to the major powers, Nth countries possessing a weapons system entirely vulnerable to a pre-emptive strike, or incapable of penetrating the active defenses of a major power, would probably not enjoy a greater degree of strategic independence and security than they do today. An Nth country might become substantially more independent, however, if it were to possess a weapons system some small portion of which could survive a pre-emptive strike and penetrate the defenses even of a major adversary.

It seems reasonably clear that the trigger value of nuclear weapons will depend on the size of the trigger. Below a certain size the trigger may well prove to be a liability rather than an asset. Above a certain size and quality, the trigger may turn into an asset of considerable significance.

Again, in relation to major powers, it is difficult to see the advantage an Nth power would obtain by acquiring tactical nuclear weapons, since in all probability the employment of such weapons would be restricted to the territory of the Nth country.

Nuclear diffusion is very likely to increase the incidence of local conflicts between Nth countries. The only reasonable assumption, it would appear, is that the possibility of major power involvement in such conflicts will remain about the same as at present. Considered in isolation, therefore, nuclear diffusion will have a strategically destabilizing effect since the consequences of military instability at lower levels must eventually be felt at the strategic level.

CHAPTER I

INTRODUCTION

Although there is a general consensus among the experts that nuclear diffusion must prove destabilizing, there is considerable variation of opinion on how destabilizing nuclear diffusion might be. To a large extent, this variation of opinion may be attributed to the very different assumptions analysts have made--often unconsciously--on such critical matters as: the military environment in which nuclear diffusion might take place; the extent of nuclear diffusion as well as the speed and the evenness with which it occurs; the size and quality of the weapons systems eventually possessed by the smaller powers; and so on.

It will be readily apparent that it makes a great deal of difference whether nuclear diffusion occurs within a highly unstable military environment or whether it occurs within an environment characterized by a very stable strategic relationship between the major nuclear powers. Similarly, the number of countries obtaining nuclear weapons, the traditions and interests of such countries, and the speed with which countries obtain nuclear weapons could all be factors of critical importance. A world of ten nuclear countries may pose new and difficult problems, but these problems may be very different from the problems posed by a world of thirty nuclear nations. Nor would the acquisition of nuclear weapons by Sweden necessarily have the same consequences for stability as would the acquisition of nuclear weapons by Egypt. And, if nations were to acquire

nuclear weapons over a fairly extended period of time, a measure of adjustment might be made that would prove impossible if the time period for nuclear diffusion is telescoped.

Even more significant, perhaps, is the assumption one makes about the nature of the weapons systems the smaller nations might eventually possess (let us say within the next 10 to 20 years). It is one thing to assume that the smaller nations would possess only a very small number of low-yield weapons, together with a delivery system limited to manned aircraft. It is quite another matter to assume that nuclear and missile technology has so advanced as to enable many of the small nations to acquire a substantial number of high-yield weapons and a missile-delivery system. Of course, all kinds of possibilities between these two extremes may also be envisaged.

These observations should not be taken to imply that it is pointless to discuss the possible effects of nuclear diffusion from a rather general point of view and without making a large number of fairly specific assumptions. The attempt to evaluate the consequences of nuclear diffusion in terms of the variety of circumstances in which it might conceivably occur is, at any rate, hardly feasible since it resembles a game of almost limitless possibilities. Besides, many of the consequences expected to follow from diffusion may not unreasonably be considered as applying in varying degree to rather disparate circumstances. At the same time, it is necessary to emphasize that these consequences will apply in varying degree depending upon the more specific conditions one assumes and that the degree to which they are applicable must prove of critical importance to the policy-maker.

In the following discussion, the principal arguments that have been put forward on the expected consequences of nuclear diffusion are examined in terms of what this writer regards as the more likely developments that might attend the process of diffusion. No attempt is made to consider these arguments by testing them in terms of a large number of possible circumstances. Nor is the attempt made to portray a particular situation, characterized by a number of rather specific features, and then to consider the consequences of diffusion within the prescribed framework. Obviously, the method that is pursued

reflects a measure of bias, since it is consciously selective. Even so, some of the assumptions that are made should raise little controversy.[1]

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1. It should be emphasized that this paper is not addressed to the problems arising from "nuclear sharing." Presumably, nuclear sharing indicates a policy whereby a major nuclear power "gives" nuclear weapons to an ally while retaining a veto right over the use of the weapons. In other words, it "shares" control over the weapons with the recipient nation in the sense that both giver and recipient must agree on the employment of the weapons before they can be used. There is a clear and decisive difference, then, between shared nuclear forces and independently controlled nuclear forces. It is equally clear that the consequences resulting from these two kinds of diffusion must differ considerably.

CHAPTER II

THE ROLE OF NOVELTY, PRUDENCE, AND NUMBERS

NOVELTY AS A DESTABILIZING FACTOR

Among the general arguments stressing the destabilizing effects of nuclear diffusion perhaps the most significant argument emphasizes novelty as a destabilizing factor. In its simplest form, it is the argument that novelty implies uncertainty and, in consequence, instability. Thornton Read makes this point as follows:

> "...a world made up of nuclear powers would be more unfamiliar than our present world (which is unfamiliar enough), more complex in its power relations, and hence more difficult to understand and deal with. Our ability to handle new situations is limited at best. The more unfamiliar the situation, the greater is the probability of serious failure. It has taken years to gain what understanding we now have of deterrence and stability in a bipolar nuclear world. A world of many nuclear powers would present much more complex problems."[2]

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2. Thornton Read, A Proposal to Neutralize Nuclear Weapons, Princeton Center of International Studies, Policy Memorandum No. 22, 1960, p. 53. Herman Kahn makes much the same point: "The 'two-power' case seems both intellectually and practically more

It is difficult to deny the force of this argument, general though it may be. To be sure, one may point to novel developments that have not had a particularly destabilizing effect on state relations. But on the whole, the weight of experience seems clearly to point in the opposite direction. And a world of many nuclear powers would be a novel world, even as contrasted with the present world. If stability depends upon our ability to understand and to control a given situation, it is only reasonable to conclude that a complex and as yet obscure situation will be less amenable to control.

There is, in addition, the argument that nuclear diffusion will lead to an ever increasing obsession with nuclear weapons, a development that must prove destabilizing because of the greater insecurity it is eventually bound to create. The spread of nuclear weapons, this argument contends, is all too likely to prove hyperbolic in character. With every increase in the number of nuclear powers, the pressure on non-nuclear nations to acquire nuclear weapons will increase. In large measure, this pressure will simply reflect considerations of prestige and the sense of "inferiority" attached to nonmembership in a club that has come to include many of the middle range and some of the smaller powers. The possession of nuclear weapons will therefore come to represent an increasingly important status symbol for a large number of the nations of the world. In part, however, this pressure will also reflect strategic considerations. In this respect, Paul Doty writes that "if a country can gain a nuclear capability that is significant in terms of the potential threat it faces, it can be strategically justified in doing so."[3] This threat need

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controllable than the 'N-power' case. The diffusion of nuclear weapons not only complicates the over-all 'analytic' problem, but the stakes at risk if events go badly would seem to be less in the 'two-power' than in the 'N-power' case." "The Arms Race and Some of its Hazards," Daedalus (Fall, 1960), p. 778.

3. Paul Doty, "The Role of the Smaller Powers," Daedalus (Fall, 1960), p. 823. Doty adds: "...while most of the smaller powers do not have strategically valid reasons to justify nuclear arming, the decision to do so by any of a number of individual nations could trigger others into following suit, since the threat presented by a nation with a few newly acquired nuclear arms is a challenge they could dare to meet."

not emanate from a major nuclear power but from one of the smaller nuclear powers. Indeed, it is the possible threat presented by a neighbor with a few newly acquired nuclear weapons, and with whom one has a serious conflict of interests, that may seem the more clearly to provide a strategic justification for acquiring nuclear weapons.

Whatever the particular complex of reasons, however, the increasingly widespread possession of nuclear weapons will have the general effect of aggravating the security problem nations face.[4] For the spread of nuclear weapons will almost inevitably result in an ever greater dependence upon these weapons and a decreasing dependence and emphasis on conventional weapons. If diffusion occurs largely by the independent efforts of the individual nations, unassisted by the major nuclear powers, it will have to come through the diversion of resources now devoted to conventional forces. Nations will probably be reluctant to support both types of forces and many of them simply cannot afford to make the effort required to develop nuclear forces while retaining adequate conventional forces. Besides, it is only to be expected that the reaction to the acquisition of nuclear weapons will be to place an exaggerated reliance upon these weapons--at least for purely regional rivalries and conflicts--and to de-emphasize the utility of conventional forces. Thus, even if the major nuclear powers were to transfer (not "share") nuclear weapons and delivery systems to their allies, the latter might still be unwilling to continue to bear the burden of maintaining adequate conventional forces.

The world will therefore move ever closer to a situation in which the present confrontation of the two major nuclear powers will be re-enacted on a more modest level between a number of the smaller powers. Given an uneven spread of nuclear weapons--much the more likely development--the temptation to resort to preventive war against an adversary not yet in possession of nuclear weapons is bound to arise. Given a fairly even spread of nuclear weapons, though weapons whose vulnerability make them little more than first-strike forces, the temptation to remove an

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4. This statement, it should be noted, is not incompatible with the possibility that a particular state may improve--at least for a time--its security by acquiring nuclear weapons. It is the international system as a whole that the statement refers to.

adversary through surprise attack may prove very great. And, what may begin as a symmetrical spread of nuclear weapons may nevertheless develop asymmetrical features. There is no reason to believe that the fears that have haunted and that still haunt the major nuclear powers will not prove equally oppressive to the smaller countries in their relations with one another. If these expectations are reasonable, the over-all consequence of nuclear diffusion must be an ever greater insecurity productive of an ever greater instability. Finally, and for reasons examined below, the insecurity and instability that may breed nuclear conflicts among the smaller powers will also hold out the prospect of involving the major powers as well.

THE RELATION OF POWER TO PRUDENCE

It is of course apparent that the argument summarized above draws its persuasive power from a number of assumptions that deserve a more careful scrutiny and that, in any event, cannot be regarded as self-evident. Even so, none of the assumptions on which it depends seems unreasonable. Occasionally, it has been pointed out that this general argument neglects the possibility that the acquisition of nuclear weapons will be a sobering experience for the smaller powers and will have the effect of making these nations more prudent. But this objection largely misses the real point of the argument. Even if it is assumed that the acquisition of nuclear weapons will have a sobering effect upon the possessors, the relevant question is not whether nations may become somewhat more prudent but whether they will resist the compulsions or the "necessity" under which they may come to believe they must act. Given the all too possible circumstances that may characterize the relations of a number of smaller powers during a period of nuclear diffusion, it may seem very imprudent--from the point of view of the interests of a smaller power[5]--not to use nuclear weapons.

Besides, although the acquisition of nuclear weapons may have the general effect of making nations more prudent, it must

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5. And in this respect, it is difficult to consider the prudential quality of the actions of a smaller nation save from the point of view of the interests of that nation--not the interests of an alliance and even less the interests of international society as a whole.

be admitted that we have very little experience to go on in this respect. What experience we do have is limited to the major powers and is by no means unambiguous. Whether this experience--itself not free from ambiguity--would be repeated by the smaller powers in terms of their immediate rivalries is at the very least open to serious doubt. And the temptations nuclear weapons may hold out to some of the smaller nations to "resolve" a conflict with a neighbor not yet in possession of these weapons may still overcome whatever increase in prudence that otherwise results from the possession of nuclear weapons.

For the most part, however, the question of prudence or--as some writers prefer to put the matter--of "responsibility" has been used as a further argument on behalf of the position that nuclear diffusion must prove destabilizing. This argument has taken a number of forms. Perhaps the most common form, and certainly the simplest, is the assertion that by definition the great powers are also the great "responsibles" and the smaller powers are somehow less responsible. Responsibility is therefore held to be by some mysterious process directly proportional to power.[6] A more "sophisticated" version of this argument declares that the great powers--meaning of course the present great nuclear powers[7]--are the more responsible because they have the most to lose if nuclear weapons are used. Smaller nations, unhampered by the burdens shouldered by the great nuclear powers, may--and probably would--be tempted to employ nuclear weapons under trivial provocation. Finally, there is the rather novel suggestion that the more technologically advanced and complex a society, the more likely is it to have a leadership that is rational and, we may assume, responsible in issues of war and peace which involve perhaps the nation's very existence.

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6. Prejudices change. In the interwar period almost the reverse belief was taken as self-evident by the majority of writers. Small powers were not only the more virtuous but also the more responsible. Purely as a personal choice, I still find the earlier belief preferable. At least it had the merit of refusing to equate power with responsibility (and by implication with virtue as well).

7. This in order to exclude China from the category of the "great responsibles."

There is no reason, however, to assume that prudence or responsibility is somehow directly proportional to power. The great powers--specifically the present great nuclear powers--are not by definition more responsible than the smaller powers. Nor are the great powers the more responsible because they have more to lose through a nuclear conflict which may eventually engulf them. At any rate, the question who has the most to lose cannot be meaningfully answered in quantitative terms. If it is to prove relevant at all, it must be asked and answered in qualitative terms. In this sense, the smaller powers surely have as much to lose as the major powers; i.e., their national existence. On this issue they may be expected--as a general rule--to be as prudent and therefore as responsible as the major nuclear powers. It is, of course, quite true that prudence and responsibility with respect to the new weaponry depends, at least in large part, upon a sophistication that can come only from a knowledge of and an experience with these weapons. No one would view with equanimity the sudden possession of a few atomic weapons by the Congolese. At the other end of the spectrum, there is little reason to assume that the leadership of Sweden, Belgium, or Switzerland would be less responsible in issues of war and peace if these nations were to possess nuclear weapons. In the case of such nations as Egypt, it is not at all clear whether the possession of nuclear weapons would heighten the probability of nuclear conflict because of an expectation that the type of leadership characteristic of such countries as Egypt would act imprudently and irresponsibly.

On occasion, however, the term responsible has been employed to describe a certain kind of weapons system rather than--or in addition to--the policy governing the use of those weapons. Thus Albert Wohlstetter speaks of a "responsible deterrent" as one that is protected from a first strike and that has successfully met the problems of command and control.[8] In this sense, responsibility implies a weapons system that avoids automaticity of

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8. Albert Wohlstetter, "Nuclear Sharing: NATO and the N+1 Country," Foreign Affairs (April, 1961) p. 362. Wohlstetter also uses the term responsible to indicate a defensive, as distinguished from an aggressive, policy. In this latter sense, he identifies responsibility with an "interest in deterrence rather than in aggression." It should be clear, however, that a nation may possess a "responsible deterrent" and still pursue a policy that is very irresponsible--and aggressive.

response as well as decentralization of decision. Of course, such a weapons system affords no guarantee that the nation possessing it will act responsibly or prudently. But it does provide the most favorable circumstances for responsible behavior; i.e., it permits one to be prudent. The merit of this particular argument, then, is to emphasize that prudent behavior is in substantial measure dependent not simply upon will or intent, but upon the objective circumstances in which nations must act. To the extent that the smaller nations are unable to fashion a "responsible deterrent," in the meaning indicated above, the prudent or responsible use of nuclear weapons may become exceedingly difficult. And in this specific sense, though only in this sense, there is a justification for equating power with responsibility.

THE "STATISTICAL" ARGUMENT

It is a very different matter to argue that the greater the number of nations--large and small--possessing nuclear weapons, the greater the chance that nuclear conflict may arise as a consequence of irresponsible action. The question at issue here is not whether great powers are somehow more responsible than small powers but whether the danger of irresponsible behavior simply increases with an increase in the number of nations that have the capability--specifically, the nuclear capability--of behaving irresponsibly. The argument, then, is "statistical" in character. It simply asserts that since there is always a possibility that the leadership of a nation--any nation--may behave in an irresponsible manner, the possibility that nuclear conflict may arise through irresponsible behavior must increase as the number of nations possessing nuclear weapons increases.

The "statistical" argument, discussed above in connection with the problem of irresponsible action, may of course be generalized by applying it to almost all of the possible ways by which nuclear conflict could arise. Most writers, in discussing the Nth nation problem, have not drawn the full consequences from the statistical argument. Even Iklé, who has sought more carefully than others to articulate the statistical theory, writes:

> "According to the 'statistical theory' the probability of a global thermonuclear war increases as the number of nuclear powers increases, because (a) the larger the number of these powers, the greater the probability that nuclear weapons will

be used in some conflict (both because of more opportunities and a greater chance of irresponsibility); and (b) if nuclear weapons are used in a conflict, the risk of its expanding into a global war is greater than if the conflict remained non-nuclear."[9]

But the "statistical theory" may be and perhaps should be put in even broader terms. It applies to the problem of accidental war, as well as to the problem of war arising from miscalculation or the misinterpretation of an adversary's intentions. It also applies to the danger of "catalytic war."[10] In a word, almost any of the causes that might lead to nuclear conflict--whether a local nuclear conflict or a global thermonuclear conflict--may be regarded as representing a statistical probability and therefore falling within the terms of the argument, as it is broadly conceived above.[11]

Whether, and to what extent, the "statistical theory" is relevant to the Nth country problem cannot be determined in the abstract. If it is assumed that despite the spread of nuclear weapons nations will continue to behave in much the same way as they now behave, that they will manifest the same degree of prudence or the lack thereof, that they will continue to have the same fears and the same aspirations, and that they will still be prone to miscalculate with about the same frequency as in the past--in short, if it is assumed that all else remains the same

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9. Fred C. Iklé, "Nth Countries & Disarmament," Bulletin of the Atomic Scientists (December, 1960), p. 391.

10. Iklé, for example, separates the "statistical theory" from the "catalytic war theory," as do most other writers who discuss the Nth nation problem. But the "catalytic war theory," to the extent that it merits serious consideration at all, is itself a statistical problem--at least in part.

11. Wohlstetter (Op. cit., p. 371) makes this point with respect to the heightened probability of war by "mistake" likely to result from nuclear diffusion. Thus: "Even if, with large-scale proliferation, each new nuclear power adopted a positive control system with a high standard of responsibility, there would be an increase in the possibility of mistakes, simply because there would be more control centers."

as before save that more and more nations have acquired nuclear weapons, then the case for the statistical theory seems very strong indeed. To accept this assumption, however, is to avoid or to beg most of the specific problems that are raised by nuclear diffusion. It must be expected that with the spread of nuclear weapons new forces and new pressures will become operative. If these forces should tend, on balance, to increase instability, then the increased possibility of conflict--whether local or global--is not merely the result of the "statistical theory" but of these novel forces as well. If, on the other hand, the forces set in operation by the spread of nuclear weapons tend, on balance, to increase stability, then despite the "statistical theory" the possibility of nuclear conflict--whether regional or global--might diminish or at least not increase. A meaningful judgment on the significance of the statistical theory to the Nth country problem cannot be made without a more detailed examination of the specific problems resulting from nuclear diffusion. At best, it can follow such an analysis and not precede--or merely bypass--it.

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CHAPTER III

THE RELATION OF NTH POWERS TO THE MAJOR NUCLEAR POWERS

In examining the more specific discussions of the effects of nuclear diffusion, and the degree to which these effects may prove destabilizing, it is useful to distinguish the possible impact of diffusion on the relations of Nth powers towards each other and on the relations of Nth powers to the major nuclear powers.[12]

With respect to the relations of Nth powers to the major nuclear powers, it has been argued that nuclear diffusion must prove destabilizing for the reason that nations acquiring nuclear weapons either would actually be in a more independent position than before or would at least feel that they enjoyed a greater degree of independence. According to this argument, nuclear diffusion may therefore be expected to have a disruptive effect on the cohesiveness and unity of the major alliance systems--particularly the Western alliance system. The smaller nations acquiring

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12. Strictly speaking, the term "Nth power" suggests the last state to achieve nuclear weapons. In the following discussion, however, the term is used--rather loosely--to indicate any nation (China and Germany excepted) that might acquire nuclear weapons in the near future. The term therefore refers both to the smaller and to the middle powers. Obviously, China is a case apart and deserves separate consideration. Probably the same should be said for Germany. But apart from these two special cases, not specifically dealt with in this paper, the distinctions that are drawn in the succeeding pages should be reasonably clear.

nuclear weapons will generally prove more difficult to control. In terms of the international system as a whole, nuclear diffusion will militate against bipolarity.

It is worth noting that this argument cannot be dismissed simply by demonstrating that nations acquiring only a very modest nuclear capability will not in fact be less dependent upon the support and protection of a major nuclear ally in resisting the pressures of another major nuclear power. Even if this is true, nuclear diffusion may nevertheless prove politically destabilizing if those nations acquiring nuclear weapons insist upon believing that these weapons do give them a more independent position. Nor does it seem unlikely that a number of them would believe--at least for a time--that even a token nuclear capability could have the effect of rendering them less vulnerable to the blandishments of a major nuclear power (or its allies).

Among those who dismiss the argument that a nuclear arsenal will in fact serve as a means for becoming independent--or at least substantially more independent--of big-power tutelage, Henry Kissinger writes: "A major nuclear power, confronted by an Nth country not backed by another major nuclear power, could always strike pre-emptively. Thus Nth countries would continue to be dependent on the support of a major nuclear power. By the same token, the danger in the proliferation of national nuclear establishments is that it may enable some Nth countries--and particularly Communist China--to commit their more powerful allies to nuclear war."[13]

Kissinger's argument is simply that in view of the nuclear force any Nth power (China excepted) can be reasonably expected to have in the next decade or so, it could not expect to reduce significantly--much less to eliminate--the retaliatory forces of a major nuclear power by a preventive or a pre-emptive strike. On the other hand, to threaten the use of nuclear weapons against a major nuclear power might well provoke the latter to a pre-emptive strike, which would even more decisively seal the fate of the smaller power. In view of this, Kissinger concludes, nuclear weapons probably would not improve the strategic position of the Nth country vis-a-vis the major nuclear power. What nuclear weapons might do is give Nth countries allied to a major nuclear power an added leverage by virtue of an ability to commit

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13. Henry Kissinger, The Necessity for Choice (1961), p. 42.

the major power to nuclear war. But even this "nuisance value" of nuclear weapons may boomerang against the smaller power, since a major power convinced of the unreliability of a smaller ally may seek, particularly at a critical moment, to dissociate itself from the actions of its ally.

It will be apparent that the strength of this position largely depends on the nature of the weapons system that it is assumed Nth powers might possess. If, for example, the weapons a smaller power might acquire could easily be destroyed through a pre-emptive strike by a major power, or if the active air defenses of a major power could easily destroy the modest forces a smaller power might launch (whether pre-emptively or in retaliation), then clearly it would be folly for a smaller power to believe that its nuclear weapons gave it a greater degree of strategic independence and security.[14] On the contrary, in relation to its great adversary it would, if anything, be less secure. For the very fact that it possesses some nuclear weapons would serve to make it a "legitimate" object of nuclear blackmail by a major power in a way that it is not a legitimate object so long as it does not possess any nuclear weapons.[15] Nor does it

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14. Of course, it still may be argued that if almost any nuclear weapons give a nation a triggering capability, then the possession of such weapons would enhance its security. Although a great power could destroy the smaller country's forces by a pre-emptive attack it would refrain from doing so for fear of sparking a global thermonuclear war. Even more, a great power would--according to this reasoning--presumably refrain from seriously threatening the smaller country for fear that such action would provoke a desperate reaction on its part, thus triggering a global thermonuclear war. For reasons indicated below, it seems doubtful that this reasoning is valid.

15. Some readers may question this point. Yet experience to date would seem to bear it out. There is a very distinct liability incurred--politically and propaganda wise--in threatening nuclear action against a nation that does not possess nuclear weapons which is not incurred in nearly the same degree when the threat of nuclear action is directed against a nuclear power. The Soviets have not been unaware of this consideration, as may be seen in their reluctance to date to use nuclear blackmail against nations that neither possess nuclear weapons nor entertain the nuclear forces of an ally.

seem reasonable to assume that if the smaller power is allied to a major power the latter would somehow be more willing or even as willing as heretofore to counter the nuclear blackmail of the other major power. The very fact that the smaller power has acquired nuclear weapons may very likely reflect a desire to gain a greater measure of independence from its major ally. It is unreasonable to expect that in these circumstances the major ally will nevertheless extend even further--at least in terms of the potential risk--the commitment it made at a time when the minor ally did not possess any nuclear weapons and was more amenable to the control of its major partner. And if the smaller power indicates in any way that it is unreliable and may act irresponsibly (i.e., irresponsibly from the point of view of the major power), the major power can be expected to cut down rather than to extend the scope of its commitment.

Nor is this all. Given a nuclear weapons system that may be destroyed either by a pre-emptive strike or by the active defenses of a major power, there is little reason to assume that a major power intent on applying pressures other than the threat of nuclear blackmail would be particularly deterred by the fact that the victim possessed such a force.[16] It is difficult to see how such a force could be employed to deter subversion and related measures. It is almost equally difficult to see how the possession of such a force could serve to deter an attack undertaken only by conventional forces, or if the smaller power mistakenly believes that its nuclear weapons permit it to reduce its conventional forces, the danger of local aggression undertaken by conventional arms alone may even increase.

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16. The argument adopted here must be considered with care. The point is not that major powers will feel free to employ limited force because of a conviction that a limited use of force can be kept limited and will not prove destabilizing at the strategic level. It is simply that a very small and inadequate nuclear force will not of itself deter a major power from action that it would otherwise take; i.e., take against a nation that did not possess such a force. Indeed, it is argued below that the possession of such a force might well encourage the major power to apply pressure on a smaller nation, if the effect of the latter's acquisition of nuclear weapons is to make its major ally more cautious about getting committed to its defense.

To be sure, there remains the possibility that a major power otherwise intent on aggression might be wary of provoking a conventional conflict with a minor nuclear power allied to a major power for fear that a desperate reaction by the minor power in using its nuclear weapons might precipitate a thermonuclear conflict with its principal ally. But against this possibility must be balanced the prospect that the major power allied to the potential victim will only be too well aware of this danger, and consequently, may be ready to dissociate itself from the initial use of nuclear weapons by its smaller ally. The willingness of a major power to extend nuclear deterrence to allies is limited enough even when those allies do not possess nuclear weapons and cannot themselves provoke a nuclear conflict or transform a conventional conflict into a nuclear conflict. Finally, in the event of a thermonuclear conflict between the great powers, a minor nuclear power allied to one of the major powers must expect the worst. There is at least the possibility that if the ally possesses no nuclear weapons, it may escape direct assault during a thermonuclear exchange of the mighty. But if it does possess such weapons, it can expect to be included in the exchange almost as a matter of course.

In sum, with respect to an Nth power's relationships to major nuclear powers, a very low-class apprenticeship in the nuclear club would seem to impose a number of liabilities and to confer almost no benefits. On the other hand, if it is assumed that the weapons systems Nth powers might eventually possess would be of such a nature as to enable some portion of them to survive a pre-emptive strike by a major power, then the picture could change quite considerably. Let us assume that an Nth country, presently allied to the United States, were to possess a weapons system of such a nature that in the event of a pre-emptive attack by the Soviets, it would still be left with enough weapons to devastate several Soviet cities. To be sure, it can be argued that a capability of this kind might also provide a standing temptation to the Soviets to undertake a preventive or a pre-emptive strike. Still, this argument seems rather strained and farfetched. Apart from a global thermonuclear war, the Soviets would be tempted to undertake a pre-emptive strike only if they were convinced that the Nth power was preparing to do the same. A strike "out of the blue" by the Nth power, for whatever reason, is of course always possible. But surely it is an extremely remote possibility, since whatever damage it might do to the adversary it must expect complete destruction in turn.

A somewhat more likely circumstance in which the Soviets might be tempted to undertake a pre-emptive strike would be in a

situation of very high tension, or even of conventional hostilities, between the Soviets--or a Soviet ally--and the Nth country. Even in this situation, however, the probability that the Nth country would attempt a pre-emptive strike, thereby insuring its own annihilation, would seem rather small, and the Soviets may be expected to realize this. Of course, if the Nth country were placed in a clearly desperate situation of having to choose between complete surrender and occupation, on the one hand, and undertaking a pre-emptive strike, on the other hand, it might choose the latter alternative, even though it would involve the nation's physical annihilation. Here again, though, a major adversary would surely be aware of this danger and would presumably take care to avoid deliberately placing the enemy in so desperate a plight. And it would avoid doing so not only because of the possibility that the Nth country's major ally might intervene. This last danger would seem appreciably greater, given a substantial nuclear capability of an Nth power. The very fact that the latter is able to provoke a significant nuclear exchange with its adversary heightens the danger that the Nth power's major ally will eventually be drawn in. And this is only to say that the ability of an Nth power to commit its more powerful ally to nuclear war is probably roughly proportionate to the nuclear strength of the Nth power.[17]

The above remarks suggest the conclusion that, in relation to the major nuclear powers, the degree of strategic independence and of security an Nth power might possess would depend upon its power to inflict damage upon a major adversary--particularly its second-strike capability. To this extent, Kissinger's previously noted argument partly misses the point. Of course, "a major nuclear power, confronted by an Nth power not backed by another major nuclear power, could always strike pre-emptively." But against an Nth power capable of devastating in a second strike several cities of the major power, there will be very little

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17. There is the further consideration that the recipient of the Nth power attack might fear--and perhaps with good reason--that its major adversary that has until now stood aside might find this moment opportune for launching a preventive strike, and in order to prevent this, might launch what it considers to be a pre-emptive strike. Then, too, the major ally that has so far remained inactive will not be unaware of the fear entertained by its opponent and may thus be tempted to launch what it considers to be no more than a pre-emptive strike.

temptation even to threaten pre-emption. Nor is it true to say that the Nth country would continue to be as dependent on the support of its major nuclear ally, for the Nth power's dependence on its major ally is obviously no more than a function of the pressures brought against it and the consequent insecurity it experiences. Given a diminution of those pressures, the dependence of the Nth power is also bound to decrease.

Thus, a certain type of nuclear arsenal under national control is likely to serve as a means for becoming much more independent of big-power tutelage. Even more, if it is true that the ability of an Nth power to commit a major ally to nuclear war is roughly proportional to the nuclear strength of the Nth power, we have the rather paradoxical result that the greater the nuclear capability of an Nth country ally, the better are its chances to weather successfully the "crisis of extended deterrence" during a period in which the increasing invulnerability of the strategic forces of the major nuclear powers will cause them to be increasingly reluctant to extend nuclear deterrence to their allies. And if this reasoning is at all sound, Nth powers--and particularly the larger among them--will have a powerful incentive to acquire as effective a nuclear weapons system as their capabilities permit.

Viewing nuclear capability as a sliding scale, then, there is a point below which the acquisition of nuclear weapons would not strengthen an Nth country's strategic independence and security in relation to the major nuclear powers. If anything, a nuclear capability falling short of this point would have the opposite effect. Above this point, however, nuclear weapons would give substantially greater independence and security and would continue to do so in ever greater degree as one moved still further up the scale. The chief difficulty, of course, is in identifying the dividing point on the scale with some degree of precision. Here, it is suggested that this point is reached when an Nth power has forces capable of surviving a first strike in sufficient measure to retaliate by striking at several cities of the major power.

There remains the possibility, urged by some writers, that small powers might desire to acquire a force of low-yield nuclear weapons in the hope that this might deter a great power from employing tactical nuclear weapons should it ever resort to force

in the region of such minor powers.[18] It is clear, however, that effective deterrence in this instance would necessarily depend upon the possession by the minorpower, or powers, of a rather substantial supply of tactical nuclear weapons. But from the point of view of the small power, what purpose would be served by the possession of such weapons? As long as a major power can achieve its ends without introducing tactical nuclear weapons, it will be to its interest to refrain from crossing the nuclear threshhold. These weapons cannot serve as an effective deterrent either to a conventional attack or to a pre-emptive nuclear strike. Against a conventional attack their initiation in the area of the small country might only serve to insure its annihilation. The major power is therefore not likely to be effectively deterred from employing its conventional forces, since it will be aware of the reluctance of the small country to introduce the use of tactical nuclear weapons save in the last extremity. Against a pre-emptive nuclear strike tactical nuclear weapons are no deterrent, since they are intended for use on the battlefield and therefore presumably cannot be employed to strike at the cities of a major power. Nor would they seem as effective as the weapons systems considered earlier in raising the possibility that their employment would provoke a global thermonuclear war. And it is upon this possibility, it should once again be emphasized, that the deterrent value of Nth power nuclear forces in relation to the great powers will largely rest.

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18. See, for example, the discussion of Arthur Lee Burns, Two Essays on Deterrence, Tempo (December, 1960), Part I. "Stability Problems of Strategic Deterrent Systems." Burns suggests (p. 6) that "a number of small atomic powers--a 'junior nuclear club'--might deter great nuclear powers from using tactical nuclear force in regions populated by 'junior club' members." A commitment of this kind, however, presupposes a very high degree of political unity. And even if it could deter the introduction of tactical nuclear weapons, could it provide effective deterrence against anything else (i.e., the use of conventional forces on the one extreme and large thermonuclear weapons on the other extreme.)?

CHAPTER IV

THE PROBLEM OF "CATALYTIC WAR"

The problem of "catalytic war" does not so much involve the relations of Nth powers to the major nuclear powers as it does the possible impact of Nth powers on the mutual relations of the major nuclear powers. In brief, the "catalytic war" theory holds that an Nth country might deliberately precipitate or catalyze a war between the major nuclear powers "through the simulation of an attack by one of the major powers against the other."[19] Once a rather fashionable theory, the danger of catalytic war (or at least this particular "catalytic war" theory) is now largely discounted by analysts of the Nth nation problem. In order for a catalytic war strategy, as defined above, to hold out the promise of success, it is of course essential that the source of the attack remain obscure, not only to the attacked nation but to its major opponent as well. (The latter nation must in any event be expected immediately to disavow responsiblity for the attack.) Even if the source of the attack should remain obscure, however, the scope of the attack would have to be quite considerable in order to persuade the attacked nation that its major adversary had launched a preventive strike. It may be doubted whether many Nth countries will possess the forces required to persuade the attacked nation of this. There is, to be sure, always the possibility that the attacked nation will react almost instantaneously

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19. Iklé (op. cit., p. 392) has discussed various weaknesses of this theory.

and without waiting either to ascertain the scope of the attack or to determine its source. Whether it would so behave must depend very largely upon the degree to which its strategic forces are invulnerable. If these forces are relatively invulnerable and if the reaction time of the major power's command and control system can provide for such contingencies, it does not seem likely that it would respond to a catalytic war strategy by immediately attacking its major nuclear opponent.[20]

In view of the risks a catalytic war strategy would entail for an Nth power, it is difficult to see what motives could prompt it to embark on such a hazardous course of action. There is always the risk that it might fail to provoke a thermonuclear exchange between the great powers. If it does fail to achieve this result, the chances are good that it will be found out and subjected to the expected consequences. And even if it did succeed in provoking a thermonuclear war between the great powers, it might not survive this conflict. Indeed, there is strong reason to believe that it would not survive. Although the attacked nation might not know the real source of the initial strike, it would presumably know that the Nth power does possess nuclear weapons. Such possession is itself sufficient reason to attack the Nth power once the major powers have come to grips. The idea that an Nth power might nevertheless accept these risks in order to achieve some vital interest (e.g., national unification) surely cannot simply be dismissed out of hand. Even so, it appears rather strained and unlikely.

Quite different from the catalytic war theory discussed above is the argument that an Nth country engaged in a conventional conflict in which it is steadily losing, might in desperation launch a nuclear strike either against a major-power adversary or an ally of the major power and thereby provoke a global thermonuclear war. In this instance, some writers prefer to speak of nuclear conflict through "escalation" rather than "catalysis." Both descriptions are correct. The conflict has escalated into an all-out nuclear

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20. If, on the other hand, the strategic forces of the major powers were to remain highly vulnerable and geared to a very close reaction time, the danger of catalytic war might be a serious one. The attacked nation might well feel that it had no choice but to respond immediately by attacking its major adversary. Then, too, there is the added danger that the other major power might feel compelled to initiate a pre-emptive strike precisely for the reason that it could not take the risk of waiting to see how the attacked nation would respond.

exchange. At the same time, the decisive element in this escalating process may be the action of the Nth power, in which case it plays the role of catalytic agent in the process.[21]

The differences between a catalytic war of this latter type and a catalytic war of the former type are fairly clear. Whereas in the former type the entire rationale of the action hinges on not being found out, in the latter type there is no question about the source of the initial nuclear strike. The circumstances in which either type might occur, therefore, are quite different. In the one, the ideal circumstance is a period of high tension in the relations between the major powers, though not involving--at least not directly involving--the Nth power. In the other, the most likely circumstance is that of an armed conflict of a conventional character (it might also take the form of a civil war) in which the Nth power is steadily losing out (either to a major power directly or, more likely, to an ally of the major power). The hope informing the one type is that the Nth power might somehow turn the trick and provoke an exchange between the giants while itself remaining relatively unscathed. The desperation in forming the other type is manifested by an act which is taken with an awareness that its consequence will very probably entail annihilation. If the latter type of catalytic war holds out a hope to an Nth power, it cannot be fulfilled by the catalytic action itself, but if at all, only by the effectiveness of the threat to take such action, which is in turn a function of the probability that the action if once taken would in fact provoke a global thermonuclear war.

The essential problem raised by the latter type of catalytic war theory therefore concerns the relationship that might be expected between local wars involving at least one Nth power and the risk of global war arising from such local conflicts. In part, the answer to this problem must depend on the frequency with which local conflicts involving Nth powers might be expected to occur.

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21. Herman Kahn comes close to the point of view adopted above when he writes: "One may wish to broaden the definition of catalytic war. Any method by which a nation uses military or diplomatic power to embroil larger nations or increase the scope of the conflict could be called catalytic." Op. cit., p. 764. For all practical purposes, this may be interpreted to mean raising the level and scope of violence; i.e., what most writers have called "escalation."

The impact of the spread of nuclear weapons on the relations of Nth powers, and the incidence of local conflicts, will be considered in the following section. Here it is sufficient to note that the principal conclusion suggested in the following section is that the impact of the spread of nuclear weapons on the relations of Nth powers to each other, and to nations not yet in possession of nuclear weapons, is very likely to be severely destabilizing. Hence, the prospects are that nuclear diffusion will be attended by an increase in the number of local conflicts. It is further suggested that along with an increase in the number of local conflicts will go an increase in the possibility of major-power involvement. In part, the answer to the problem posed above has already been suggested in the preceding section. There it was pointed out that, although any resort to force directly or indirectly involving a major power is likely to prove destabilizing at the strategic level, the degree to which the initiation of nuclear weapons by an Nth power in a local conflict would prove destabilizing at the strategic level depends very largely upon the size and quality of the nuclear forces at the disposal of the Nth power.

CHAPTER V

THE RELATION OF NTH COUNTRIES TO EACH OTHER

The effect of the spread of nuclear weapons on the relations of Nth countries to each other would appear to be as follows. Assuming that nuclear diffusion occurs in a very uneven manner, and the chances are that this will be the case, a number of the nations acquiring nuclear weapons may be expected to use their newly gained advantage to resolve any serious conflicts of interest in their favor. The impetus to do so will be particularly strong if it is apparent that this advantage is only very temporary. Nor will it be necessary in a substantial number of cases to possess anything but the most modest of weapons systems, for there are many small countries which are for all practical purposes identified with their capitals. To destroy the capital is in effect to destroy the nation.

Even though it is almost precluded that nuclear diffusion will generally proceed in a symmetrical fashion, it is possible that two rival Nth nations might acquire nuclear weapons at approximately the same capabilities. In this case, some writers believe that extreme instability will stem from a different reason; i.e., the very destructiveness of nuclear weapons. Thus Henry Kissinger has written: "None of the smaller countries will have the resources to create much more than a rudimentary first-strike force. The elaborate combination of warning, hardening, and mobility needed to survive a surprise attack seems beyond their capability....in order to safeguard their hard-won nuclear

capabilities, Nth countries will find themselves under nearly irresistible pressure to launch a surprise attack."[22]

This is perhaps too simple though. Some Nth countries will be able to create relatively invulnerable forces in relation to the kind of attack that could be made by another Nth country. Besides, if we assume symmetry in the nuclear capabilities of two Nth countries, the nation undertaking the surprise attack may--and probably would--have to choose between destroying the nuclear forces of the adversary or destroying his cities. The former alternative might require it to expend all its forces, and then with no certainty of complete success, whereas the latter alternative would obviously leave it exposed to certain retaliation. To make these qualifications is not to deny that a symmetrical spread of nuclear weapons would give rise to considerable instability between Nth powers and that this instability would stem primarily from a mutual fear of surprise attack. It is only to point out that the instability resulting from a fear of surprise attack, and consequently the pressure to launch a surprise attack, would probably not prove quite as great as commonly supposed because of the inhibitions that may be expected to operate on Nth countries. After all, unless it is assumed that America is quite unique in her virtue and the Soviet Union quite unique in her prudence, we already have a historical model of sorts that might be applied--with appropriate modifications, of course--to at least some of the Nth countries.

Even so, the position that as among Nth countries generally the spread of nuclear weapons will give rise to increased instability, and a greater prospect not only of conflict but of nuclear conflict, does appear very persuasive. And if conflicts among Nth countries are more likely, it seems plausible to conclude that this consequence will have a destabilizing effect on the strategic relationship of the major powers, thus increasing the possibility of central thermonuclear war over what it would otherwise be in the absence of nuclear diffusion. The significance of the qualification should be apparent. It may well be--and probably is--true that if the major powers eventually acquire highly invulnerable forces and largely resolve the other problems on which strategic stability is dependent, the spread of nuclear weapons will not create an environment characterized by less strategic stability than we possess today. This is only to say that the destabilizing effects of nuclear diffusion at the strategic level will probably not outweigh the stabilizing effects of the measures the major powers are presently taking. Hence a future world in

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22. Kissinger, op. cit., pp. 244-45.

which there are many nuclear powers may still be a more stable world in terms of the prospects of global thermonuclear war than is the present world. But it is also likely to be a much less stable world than it would otherwise be if nuclear diffusion could somehow be prevented.

The above comments may be questioned, however, on the ground that they simply assume the likelihood of major power involvement in local conflicts. But even if it is granted that nuclear diffision will create circumstances more conducive to local conflict it still does not follow that the major powers will necessarily be involved in these conflicts. On the contrary, it has been argued that "the diffusion of nuclear capabilities might make the involvement of major powers in local conflicts appear to be more risky and hence render it less likely."[23]

In reply to this argument, the following points may be made. A clear separation must be drawn between the likelihood of local conflicts initiated or instigated by a major power against an Nth country and the likelihood of local conflicts between Nth countries which occur independently of and perhaps even in spite of the wishes of the major powers. It is not necessary to contend that the incidence of the former type of local conflict will probably increase in a period of nuclear diffusion. It is possible that this type of conflict will even become less likely, though it is difficult to make out a very persuasive case in support of this conclusion. At any rate, the critical point here is whether there will be an increased prospect for conflicts of the latter type and whether the factors operating to impel eventual major power involvement in conflicts between Nth powers will be as strong as are the forces operating today to involve major power involvement in local conflicts. The position that nuclear diffusion will increase the prospects for independent local conflicts seems difficult to deny. As for the likelihood of major power involvement in local conflicts, it seems doubtful that this likelihood will be substantially affected in the majority of instances by the possibility that nuclear weapons may be employed by the parties immediately involved. This likelihood arises not so much from the weapons employed (and particularly if the Nth powers involved have a very modest nuclear force) as it

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23. Ikle, op. cit., p. 391. And Ikle adds: "In other words, Nth country capabilities might eigher help to deter local agression altogether or they might help to isolate local conflicts."

does from the more basic structural characteristics of the Cold War and the seeming inability of the major powers to refrain from eventually involving themselves in local conflicts.[24]

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24. Even if it were to be conceded that nuclear diffusion would operate to decrease the likelihood of major power involvement in local conflicts, this diminished likelihood would still have to be weighed against the prospect of increased conflict among the Nth powers. Unless it can be shown that very compelling considerations would militate against major power involvement in Nth country conflicts, it would seem that the more reasonable conclusion is that an increase in the prospects for local conflicts will carry with it the expectation of major power involvement in at least some of these conflicts. In a word, the "statistical theory" appears more persuasive here than the argument which is based on the operation of novel forces.

CHAPTER VI

GENERAL CONCLUSIONS

First: It is likely that nuclear diffusion will prove destabilizing if for no other reason than it will present us with a novel world, and a world which is, on the whole, substantially less secure than the present world. The acquisition of nuclear weapons, it is true, may be expected to have a sobering effect upon nations. Nevertheless, any increase of prudence may be more than offset by the actual insecurity many nations will experience.

Second: In relation to the major powers, the position of Nth countries will largely depend upon the nature and quality of the weapons systems they are able to acquire. Those nations possessing a weapons system that can be entirely destroyed by a pre-emptive strike, or that can be readily destroyed by the active defenses of a major power, would probably not enjoy a greater degree of strategic independence and security. If anything they are likely to be less secure in relation to a major power intent on applying pressure ranging from subversion to the employment of conventional forces.

On the other hand, an Nth country may well become considerably more independent if it possesses a weapons system some small portion of which could survive a pre-emptive strike by a major power--enough, let us say, to destroy at least several cities of the major power.

This result follows not only from the reluctance of a major power to incur the risk of losing several cities by pushing an Nth power too far, but also from the fear that during such an exchange with an Nth country its major adversary--particularly if it is allied to the Nth country--may be tempted to strike or even feel compelled to strike. The "trigger" value of nuclear weapons for an Nth country will of course depend on the size of the trigger. Below a certain size the trigger may well prove to be a liability rather than an asset, both in relation to a major adversary as well as in relation to a major ally. But above a certain size and quality, the trigger may turn into an asset of considerable significance.

Finally, in relation to major powers, it is difficult to see the advantage an Nth power would obtain by acquiring tactical nuclear weapons, assuming that the area in which such weapons were to be employed would in all probability be restricted to the territory of the Nth country.

Third: Whether nuclear diffusion raises the danger of so-called "catalytic war" depends, in the first place, on what one has in mind when using the term. In one sense, the term has been used to describe a situation in which an Nth power might deliberately precipitate a thermonuclear exchange between the major powers by the simulation of an attack by one of these powers against the other. The reality of this danger arising from nuclear diffusion is increasingly discounted and, for reasons elaborated in earlier pages, it is believed rightly so. In another sense, however, the term catalytic war may be used to describe a situation in which an Nth country, finding itself in a desperate plight, deliberately strikes at a major nuclear power and thereby precipitates a global thermonuclear war (though, once again, the prospect that such a strike might lead to a central thermonuclear war will depend in large measure on the size and quality of the nuclear forces of the Nth country). Since this danger would probably be greatest in a situation of armed conflict involving the Nth country, most writers prefer to speak of nuclear conflict through "escalation" rather than through "catalysis." While both of these descriptive terms are correct, if the decisive element in this escalating process is the action of the Nth country in initiating the use of nuclear weapons, it has served the role of a catalytic agent in provoking thermonuclear conflict.

An estimate of the effect nuclear diffusion may have on the prospects for catalytic war in this latter sense of the term depends not only on the expected frequency of local conflicts involving Nth countries, but also on the likelihood that such

conflicts may turn into global thermonuclear war. The position taken here is that nuclear diffusion will increase the likelihood of local conflicts among Nth countries and that the possibility of major power involvement in such conflicts is likely to remain about the same as is the possibility of major power involvement today in local conflicts. If such conflicts as occur between Nth countries can be effectively contained and prevented from developing into a global war, it will not be due--at least not primarily--to the noninvolvement of major powers (out of fear that involvement in Nth country conflicts has become too risky) but to the progress the major powers have made in creating invulnerable forces and in resolving the problems of command and control over these forces. Even so, nuclear diffusion will have a strategically destabilizing effect primarily because it will increase the likelihood of military instability at the less than strategic level and this instability, it is believed, must eventually have an effect at the strategic level.